

CLAIMS

1. A method for diagnosis of tank leakage in a tank ventilation device made up of a fuel tank, which is directly connected with an intake manifold of an internal combustion engine by means of at least one storage unit and a tank ventilation valve, wherein the at least one storage unit has a ventilation line with a check valve and during a tank ventilation, provides outgassed fuel from the fuel tank via the tank ventilation valve into the intake manifold, and wherein the tank ventilation device is checked during a diagnosis for tank leakage for leaks, wherein during the tank ventilation, a pressure in the fuel tank (1) is adjusted by means of the check valve (10), which at least at a median, is commensurate with a predetermined diagnosis pressure in the fuel tank (1) during the diagnosis for tank leakage.

2. The method according to claim 1, wherein the check valve (10) is a magnetic valve, which is cyclically opened and closed during the tank ventilation.

3. The method according to claim 1, wherein the check valve (10) is a throttleable control valve that is continually adjusted during the tank ventilation.

4. The method according to claim 2, wherein the pressure in the fuel tank (1) is controlled by means of control apparatus (9) controlling the check valve (10), wherein the control apparatus (9) conveys the pressure in the fuel

tank (1) measured by a pressure sensor (11) as a control variable via a control line (16).

5. The method according to claim 4, wherein the pressure in the fuel tank (10) is controlled by means of a two-point control between an upper threshold pressure and a lower threshold pressure.

6. The method according to claim 1, wherein the diagnosis of tank leakage is performed by means of a negative pressure in the fuel tank (1).

7. The method according to claim 1, wherein the mass of the fuel outgassed from the fuel tank (1) is calculated by means of a mass balance.

8. The method according to claim 1, wherein a calculation of a mass of the fuel outgassed from the fuel tank (1) takes place during the tank ventilation.

9. The method according to claim 8, wherein the calculation of the mass of the fuel outgassed from the fuel tank (1) takes place only during predetermined operating conditions.

10. The method according to claim 1, wherein an outgas pressure increase in the fuel tank (1) affecting the outgassed fuel is calculated and the

total pressure increase determined with the diagnosis of tank leakage is corrected to the outgas pressure increase.